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Debugging VB/Win Applications

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DEBUG.ZIP



Overview

□ Avoid

- Coding style
- Naming conventions

□ Correct

- Steps
- Breaks
- Watches

□ Reality check

- Error handling
- Misc. tips
- OLE Automation



Coding Style

- ❑ Comments, comments, comments
- ❑ Modular, modular, modular
- ❑ GLOBAL.BAS
- ❑ Always use 'Option Explicit'
- ❑ Avoid the Variant datatype



More Coding Style...

- ❑ **Avoid multi-variable dim statements**
 - `Dim x, y As Integer`
- ❑ **Use the tightest scoping possible**
- ❑ **Declarations at top of procedures**
- ❑ **Use lots of white space**
- ❑ **Keep procedures short**



Naming Conventions

□ Control naming

- Never accept default names
- Three-letter object prefix
- Make name and caption consistent

□ Procedure prefixes

□ Consistent procedure conventions

□ Use case effectively

- Upper-case constants
- Mixed-case variables

□ Hungarian notation



Naming Examples

```
Global Const OLE_ACTIVATE = 7
```

```
Dim iCounter as Integer
```

```
Dim lBigNumber as Long
```

```
Dim sUserName as String
```

```
txtFirstName.Text = "Scott"
```

```
lblFirstName.Caption = "First Name:"
```

```
frmUserData.Caption = "User Data"
```

```
Sub UserWriteAddress()
```

```
End Sub
```



Steps, Breaks, Watches

- ❑ Single step vs. procedure step
- ❑ Use break and step together
- ❑ Watch expressions and watchpoints
- ❑ Use call stack to step out of procedures
- ❑ Use F9 and F5 to move by chunks
- ❑ Shift+F2 and F2 to navigate procs
- ❑ Consider using debug flags



The Debug Window

□ Test-drive procedures

➤ Events, Subs, Functions

- Command1_Click
- InitData
- ? SquareIt (3)

□ Evaluate expressions

➤ Properties, Variables, Expressions

- ? Text1.Text
- ? iRate
- ? $((x * 2) ^ 3)$
- X = 4 'X must be in scope

□ Debug.Print



Error Handling

- ❑ Do it early in development cycle
- ❑ ALL I/O, ALL memory allocation
- ❑ Indent to clearly show trap area
- ❑ Only use where necessary - never add On Error Resume Next to top of procedure
- ❑ Check error code before resume - never assume what the error is
- ❑ Use 'Case Else'
- ❑ Use MsgBox to display information



OLE Automation

- ❑ Know your objects!
- ❑ Scope is Key!
- ❑ CreateObject vs. GetObject
- ❑ Multiple Instances of same application
- ❑ Passing data between applicaitons



Miscellaneous Tips

- ❑ Mark and date undone sections
- ❑ Window positioning
- ❑ Use multiple modules to see multiple procedures simultaneously
- ❑ Don't maximize forms
- ❑ Multiple .MAK files
- ❑ Save frequently...in ASCII
- ❑ Write tests before writing code



More tips...

- ❑ Be careful with replace
- ❑ Multiple level undo is your friend
- ❑ WPS utility
 - \VB\CDK\WPS.EXE
- ❑ DLL search path (see docs for LoadModule API)
 - Current Directory
 - \Windows
 - \Windows\System
 - Directory where .EXE is running
 - DOS Path
 - Directories mapped by network



Questions?

